



**Indian Health Service**

**RESOURCE AND PATIENT MANAGEMENT SYSTEM**

# **RADIOLOGY SYSTEM (RA)**

## **USER GUIDE**

**Version 4.0**

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## Preface

The Radiology Software package for the Indian Health Service (IHS) is part of the Resource and Patient Management System (RPMS) and is based on the Veterans Administration's (VA) Decentralized Hospital Computer Program (DHCP) Radiology package. This User Guide is designed to assist IHS staff in using the Radiology Software.

This User Guide will explain how to get started and will describe how each Radiology staff member can use the software to help manage the flow of information associated with each patient.

### Brief Background

The IHS Radiology Software package was developed at the Alaska Native Medical Center. The package is an adaptation of the VA Radiology package and is designed to assist with the functions related to processing patients for radiological examinations. The Radiology Software package automates the entire range of functions performed in a Radiology Department, including the following:

- Order entry of radiology requests by clinical staff
- Online patient registration for exams
- Automatic printing of flash cards and jacket labels
- Transcription of radiology reports/results
- Verification of reports online. Using electronic signature codes, a radiologist may verify and sign-off on transcribed reports.
- Displaying/printing results for clinical staff
- Automatic tracking of requests/exams/reports
- Generation of management statistics/reports, both recurring and ad hoc.

The Radiology package automates many tedious tasks previously performed manually, providing faster, more efficient and accurate data entry and more timely results reporting. Perhaps the single greatest advantage is the increased speed with which results become available to physicians who may query the results of exams at computer terminals anywhere in the facility.

Information regarding each examination is stored by the system and may be compiled to produce a variety of reports necessary in carrying out daily business and for use by management in analyzing workload. Information required to generate AMIS reports (AMIS is the VA workload reporting system) and resource allocation reports is also collected. The IHS Radiology package is fully integrated with VA FileMan and captures certain patient demographic information supplied by the RPMS System, thereby eliminating the need to enter and maintain a separate patient database. It interfaces with the IHS V Radiology file, thus enabling results of radiological exams to appear on Health Summaries.

The Radiology package uses CPT codes for its medical imaging procedures. This will enable future versions of the IHS Billing Package to generate third-party claims in an automated fashion from the IHS Radiology database.

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## 1. INTRODUCTION

The IHS Radiology Software is based on the VA Radiology Software which has been evolving over the past several years. The developers of the Radiology Software have provided many options designed to satisfy the needs of VA staff who have been using the software during this period.

The IHS Radiology Software contains a plethora of options and features designed to met the needs of users in the Veterans Administration and the Indian Health Service. Looking at this User Guide, the beginning user can become overwhelmed. The goal in this User Guide is to help him overcome these feelings of bewilderment by taking the following simple approach.

1. Forget the computer for a while. Look at how the Radiology Department works and how it fits in with the rest of the hospital or clinic.
2. Examine what comprises the user's job in the Radiology Department? What information does he create and pass along to coworkers? What information is needed from coworkers for the user to do his job?
3. Now, concentrating on just the user's individual responsibilities, how does the Radiology Software fit in -- how will he use the Radiology Software to do his job?

Section 3 of this User Guide is aimed at answering item question #3. All users should read Sections 1 and 2, which provide general information. Then, most users need to read only that section of Section 3 that pertains to them.

It is a given that the user will sign on to the computer and practice. To help with this, each site will select a staff member who will be the "Radiology Computer Expert" and who will be trained on all of the concepts in this User Guide. The site Expert will guide the training exercises and answer questions. Also, the site Expert can contact the programmers who helped write this User Guide if there are any questions which he cannot answer.

### 1.1. BASIC FLOW OF WORK

The quickest way to understand how to use the IHS Radiology Software is to look at the basic flow of work in a Radiology Department.

1. A patient is referred to the Radiology Department by a doctor. The Radiology Department must **register the patient** - what is the patient's name and what radiology procedure has been requested?
2. The patient is sent to the room where the radiology procedure is performed. A radiology technician must update or **edit the patient's examination record** to show that the procedure was performed.
3. A radiologist reads the patient's films and records his report on paper or on an audio cassette. A transcriptionist **transcribes the radiologist's report** into the patient's record.
4. The radiologist reviews what the transcriptionist has typed and **verifies** that the report is correct.

5. The verified report is made available for the doctor's **viewing**. The report and other information is filed in the **patient's record**.

Below, the user will walk through simple examples of how to use the Radiology Software in each of the five steps listed above. At this point, he will ignore most technical computer requirements and concentrate on what information must be created and passed into the system for use by others.

## 1.2. REGISTER THE PATIENT

The first step is to register the patient for the radiology examination(s) requested by the doctor. The information required for this step includes the following.

<u>Information</u>	<u>Comments</u>
Patient name or number	Identify the patient to the software. This can be accomplished by typing the patient's name or the patient's chart number. Use whichever is preferred.
Patient location	In which ward or clinic is the patient? Is the patient an outpatient?
Requesting Provider	What is the name of the doctor or health care provider who requested this examination for this patient?
Procedure	What procedure (CHEST SINGLE VIEW, NECK SOFT TISSUE, ETC.) has been requested?
Modifiers	Are there any modifiers (LEFT, RIGHT, BILATERAL, ETC.) to the above procedure?
Clinical history	Describe the patient's clinical history (optional).
Case number	The Radiology Software assigns a case number to this examination.
Flash Cards/Work Sheets	The Radiology Software will (or will not) print flash cards and work sheets as requested. The flash cards and work sheets are used by the technician in the next step.

At most sites, the above information is entered by a clerk or receptionist. Once it has been typed into the computer system, the patient has been registered and is ready to proceed to the next step where a technician will perform the requested procedure and will edit the examination record accordingly.

## 1.3. EDIT AN EXAM

During the next step, the technician performs the procedure(s) and enters the following information into the computer system.

<u>Information</u>	<u>Comments</u>
Case number	Identify the case number for the procedure involved.
Pregnancy related	For women patients, the user must enter LAST MENSTRUAL
Questions	PERIOD and PRIMARY MEANS OF BIRTH CONTROL as a precautionary measure.
Registry data	Alter the patient record to change the data described above in Section 1.2, if appropriate.
Category of exam	Inpatient or outpatient.
Technician	What is the technician's name(s)?
Complication	Record any complications.
Primary exam room	Where did the examination take place?
Film size & number	What film and how many did the user use?

As a result of this step, the films will be passed to the radiologist for reading and diagnosis. Following that reading, the radiologist will dictate his report onto audio cassettes or into a dictation system. Those reports will then be given to the transcriptionist.

#### **1.4. TRANSCRIBE A REPORT**

The transcriptionist types the radiologist's report into the patient's computer record, entering the following information:

<u>Information</u>	<u>Comments</u>
Staff radiologist	What is the name of the radiologist who dictated this report?
Reported date	What is the date of the report?
Clinical history	This text in the patient's record may be altered if appropriate.
Report text	Type the radiologist's report into the patient's record.
Impression text	Type the radiologist's impression into the patient's record.
Print	YES or NO if printing the report is desired. (To give it to the radiologist, for example.)

Concluding this step, the radiologist's report and impression have been recorded in the patient's record. Now the radiologist can view this information, alter it as necessary, and verify that the information is correct.

## 1.5. VERIFY A REPORT

It is the radiologist's responsibility to audit their reports and impressions in patients' records and to verify that they are correct. While doing this, he may make corrections as necessary.

<u>Information</u>	<u>Comments</u>
Electronic signature code	Only a radiologist may verify a report. His personal electronic signature code assures that no one else may operate this part of the software.
Radiologist	Give the name of the radiologist whose reports to verify.
Report	The radiologist may view the report and alter it as necessary.
Report status	The radiologist may enter that the report has been VERIFIED or that it remains in DRAFT status.

Once the report has been verified, other staff members (doctors) may view it immediately. Also, multiple copies of the reports will be printed and will be filed in the clinic, ward, file room, and/or medical records files as appropriate.

## 1.6. VIEW AND FILE A PATIENT'S RECORD

### 1.6.1. Viewing

Authorized staff can view verified reports immediately. One option is to type in the case number, whereupon the computer will display or print the record. If the case number is unknown, enter the patient's name or chart number and the computer will display a list of the open case numbers and procedure names for that patient. Then choose the case number to view.

### 1.6.2. Filing

Periodically (once or twice a day, etc.), the Radiology Supervisor can request that all unprinted, verified reports be printed for filing. The reports are printed by queue: CLINIC, WARD, FILE ROOM, MEDICAL RECORDS. As the supervisor makes this request, he may choose to empty some or all of those queues.

### 1.6.3. Other Reports

During the process described above, supervisors and individual staff members may wish to view the backlog of work or the status of certain patients. Authorized staff members may produce status reports using the Radiology Software which will provide this information. For example, a technician may wish to view all the procedures for all the patients who have been registered (WAITING FOR EXAM) but have not yet been processed. Such information is readily available through the Radiology Software.

## 1.7. WHAT DOES THE RADIOLOGY SOFTWARE DO?

The Radiology Software is designed around the basic workflow described above. The software helps register patients for radiology examinations and collects the data related to that process. At each step, a Radiology Department staff member enters information about the patient's radiology examination through easy-to-use question and answer menus. Once that is completed, the information is immediately made available through the computer, to doctors and other authorized staff members.

The software also accommodates real life situations where things do not always run smoothly. Patients become ill or have an allergic reaction so that the examination cannot be completed. The radiologist sometimes decides that the transcribed report must be changed. The Radiology Supervisor must be able to identify and know the number of patients who are waiting for the next step in their examination process. A flash card must be reprinted. The Radiology Software was designed to accommodate such issues. For IHS, the major functions of the Radiology Software include:

- Registering a patient for an exam;
- Editing (or updating) an examination record;
- Transcribing an examination report;
- Verifying the report;
- Producing and distributing the verified reports;
- Printing flash cards, examination labels, and jacket labels;
- Monitoring the progress of a patient's record;
- Confirming that the information on a patient's record is complete and current;
- Determining at what step in the process a patient record is located;
- Printing administrative summary and statistics reports;
- Setting up and initializing the Radiology Software for this site's user base and computer equipment environment;
- Maintaining the list of films, procedures, examination rooms and other items particular to this site's Radiology Department.

One person is not expected to do all of these things. In most cases, one person must learn to do only one or two of the above functions. Thus, the approach to showing individuals how to use the Radiology Software consists of the following.

1. How to sign on to the computer with an authorized access code.
2. How to use the menus to select the appropriate function.
3. How to enter information to complete the requirements of a particular function.
4. How to sign off the computer.

Since all users must know items 1, 2, and 4, they will be addressed in Section 2. Point 3 consists of all the major functions mentioned throughout this Section. Each person must know only the functions related to his job. For most people, these functions will be covered in Section 3.

## 2. CONVENTIONS AND GUIDELINES

The purpose of this Section is to:

- make the remaining Sections easier to use and understand
- explain three fundamental skills - how to sign on, how to navigate through the menus, and how to sign off.

Sections 2.3, 2.4, and 2.5 explain the three fundamental skills listed above.

### 2.1. CONVENTIONS OF THIS USER GUIDE

Before writing this User Guide, the authors established rules to be consistent in the use of conventions and style throughout, thereby making the document easier to use. Section 2.1 should assist the user in becoming familiar with the flow and conventions, making it less difficult to read the other sections.

#### 2.1.1. Conceptual Outline

This User Guide is organized around the job functions of IHS Radiology Departments. In this document, the user should be able to connect the features of the software with the responsibilities of each job function, using the following conceptual outline. The user should:

- Examine the job functions: register the patient; perform the examination; transcribe and verify the report; distribute the report; cancel an examination; recover from an error; produce summary statistics. What must happen first then subsequently? When can (or should) a staff member execute a particular software feature?
- Review the information required for each process. What information must a staff member provide in this step for the succeeding steps to function properly?
- Find an example for using a feature of the software which is associated with the particular job function and information requirement.

#### 2.1.2. Organization and Usage

The examples shown in this User Guide are like the examples used by the VA, and are included to strengthen the association with the IHS job functions and for the user's convenience. The following user guidelines being adhered to are listed below.

- In the examples, all user responses are underlined so the user can distinguish the difference between when the computer is prompting for a response and when the user is answering it.
- **RETURN** means to press the ENTER (Return) key. When representing a user response it will be underlined, e.g., RETURN.

- The circumflex, or up-hat, indicated by <^>, is entered to exit and computer request without responding to that request.
- Each example provides a MENU PATH which lists the menu options that must be selected to gain access to the example's starting point. Section 2.4 explains how to navigate through the menus.
- The data used in the examples are consistent throughout the User Guide. The same set of staff members, exam rooms, procedures, etc., are used in all examples. Each example is connected to the other.
- Each feature is accompanied by an example.

### 2.1.3. Words to Avoid Confusion

In the Radiology Software and in this User Guide, the same words are used to mean different things and different words are used to mean the same thing. Unfortunately, this is unavoidable. Be aware of the following.

- Within the IHS, a 6-character CHART NUMBER (99-99-99) is used to help identify individual patients. Within the VA, the 9-character SOCIAL SECURITY NUMBER is used for the same purpose.
- TECHNOLOGIST and TECHNICIAN are used interchangeably.
- Each site will have one RADIOLOGY LOCATION – the Radiology Department. Each site will have several RADIOLOGY REQUESTING LOCATIONS - wards and clinics which are also in the Hospital Locations file. Sometimes the word LOCATION will take on its English language meaning - whereabouts.

### 2.1.4. Modest Goals

It is the authors' hope that this User Guide will help make the user a proficient beginner. To become an expert, it is recommended that he use the Radiology Software over several months and confer with the Radiology Computer Expert.

## 2.2. CONVENTIONS OF THE RADIOLOGY SOFTWARE

The ORIENTATION - WORKING WITH THE SYSTEM section provides guidelines to introduce the beginning user to an interactive computer system. It also furnishes general information related to the Radiology Software and the user/computer relationship, and is included here for convenience.

Interactive System	The Radiology software uses an interactive system; a system which performs an immediate action based on the user's responses to system prompts. The system displays prompts which require the user to supply information. When keying in the response, the system immediately processes the information entered and may respond by:
--------------------	---

Prompting to supply more information while supplying information to the user for completing a task (such as printing a report)

#### Guidelines

To work effectively within an interactive system, follow some important guidelines:

- become familiar with the process of accessing a function, be able to recognize prompts, and provide appropriate responses
- type in responses accurately;
- be sure to type the numeric character "0" (for zero) instead of upper case "O," and the numeric character "1" (for one) instead of lower case "L"; and
- become familiar with the keyboard and be aware of any special function keys which instruct the system to perform a task.

#### Accessing a Function

When signing onto the system, the user must enter his access and verify codes. These are special alphabetic and numeric characters assigned to him so the computer system can recognize him as a valid user. No two users will have the same access and verify codes.

After signing onto the system, the main menu will appear on the screen. Each user will see only those menus and options he is allowed to use. Users are prompted to select a menu or option only when allowed more than one response at each menu level.

An example of a main menu may appear as follows:

```
MCH  MATERNAL AND CHILD HEALTH
RAD  RADIOLOGY TOTAL SYSTEM MENU      (example of main menu)
MC   MANAGED CARE INFORMATION SYSTEM
```

Select Main Menu Option:

Type in selection from the choices given.

Select Main Menu Option: **Radiology Total System Menu**

and press RETURN. The user's Radiology menu will now appear onscreen and include any or all of the following. His security code will indicate to the system which menus and options are intended for his use.

```
REQ    RADIOLOGY ORDER ENTRY MENU ...
EXAM   EXAM ENTRY/EDIT MENU ...
REP    FILMS REPORTING MENU ...
MGT    MANAGEMENT REPORTS MENU ...
SUP    SUPERVISOR MENU ...
OFR    OUTSIDE FILMS REGISTRY MENU ...
PROF   PATIENT PROFILE MENU ...
PAT    UPDATE PATIENT RECORD
USR    USER UTILITY MENU ...
IHS    IHS RADIOLOGY MENUS ...
SITE   RADIOLOGY COMPUTER SITE MANAGER MENU ...
```

SELECT RADIOLOGY TOTAL SYSTEM MENU OPTION:

At the “Select Radiology Total System Option” prompt, enter the option of choice.

Select Radiology Total System Menu Option: **Management Reports Menu**

A RETURN should always be entered after responding to a prompt, as it moves from prompt to prompt and enters responses into the system.

#### Types of Prompt

Prompts are questions on the screen which ask or “prompt” a user to enter information. After the prompt appears, enter the requested information, press RETURN, and the system responds with another prompt or by performing a task.

#### Default Prompts

A prompt which contains a default value is known as a DEFAULT prompt. A default value is usually the expected answer to the prompt and is provided as the likely response. This default value is followed by double slashes. In the example below, the default value is MALE.

SEX: MALE//

To accept the default, press RETURN. This action tells the system, “Yes, MALE is my answer.” Any other appropriate answer could be keyed in directly after the double slashes:

SEX: MALE// FEMALE

This action tells the system, “No, my answer is not MALE, it is FEMALE.”

If the length of a default value is greater than 20 characters, the two slashes will usually not appear. Rather, the prompt will show “Replace.” This will be addressed in Changing and Deleting Information.

Yes/No Prompt	<p>A YES/NO prompt asks a question which requires a YES or NO answer. Often a YES/NO prompt is asking to verify an answer given to the preceding prompt. This gives an opportunity for the user to change his mind.</p>
Select Prompt	<p>At the SELECT prompt, the user is being asked to make a selection from a list of possible responses. The prompt</p> <p>Select PATIENT NAME:</p> <p>may have more than one possible answer. Enter the response or if uncertain as to how to respond, ask for a list of choices by typing a &lt;?&gt; or &lt;??&gt; at the prompt. In some instances, the user may be able to add a new entry at a SELECT prompt.</p>
Providing Accurate Responses	<p>The Radiology Total System module is designed to accept only certain types of responses to each prompt. Every response must meet the format requirements of the prompt it answers. These requirements vary in terms of whether the response should be given in alphabetic characters, numeric characters, a combination of both, and the length of the response.</p>
Help Messages	<p>When the format of a response is specific, there usually is a HELP message provided for that prompt. HELP messages provide lists of acceptable responses or format requirements which provide instruction on how to respond.</p> <p>A HELP message can be requested by typing a &lt;?&gt; or &lt;??&gt;. The HELP message will appear under the prompt, then the prompt will be repeated. For example, perhaps the user sees the prompt</p> <p>Sort by TREATING SPECIALTY:</p> <p>and the user needs assistance answering. The user enters &lt;?&gt; and the HELP message would appear.</p> <p>Sort by TREATING SPECIALTY: ? CHOOSE FROM:     .01 SURGERY     1 CARDIOLOGY     12 PSYCHIATRY</p> <p>Sort by TREATING SPECIALTY:</p> <p>For some prompts, the system will list the possible answers from which the user may choose. Any time choices appear with numbers, the system will usually accept the number or the name.</p> <p>A HELP message may not be available for every prompt. If the user enters a &lt;?&gt; at a prompt that does not have a HELP message, the system will assume an error and repeat the prompt.</p>

System Responses to Error	<p>The system will give the user some indication any time it interprets a response as an error. One or more of the following may occur if the user enters an unacceptable response:</p> <ul style="list-style-type: none"><li>• the user hears a “beep”;</li><li>• double question marks &lt;??&gt; are displayed after the user types in a response;</li><li>• a HELP message is displayed which describes the required format;</li><li>• the prompt is repeated;</li><li>• In case of an error, check for a HELP message, examine the response, and enter a correct response.</li></ul>
System Prompts for Confirmation	<p>At times, the system will respond to information the user has entered to validate his answer. In addition to the YES/NO prompt, there are other messages which prompt the user to verify his previous response. On the screen the user might see:</p> <p>Select PATIENT NAME: <u>JONES,JILL</u> ARE YOU ADDING 'JONES,JILL' AS A NEW PATIENT? NO//</p> <p>The user then reviews the message and confirms his entry. If the user wishes to enter JONES,JILL as a new patient, he would key in YES. If he entered the name in error or incorrectly, he would enter a RETURN to accept the default of NO.</p>
Abbreviating Responses	<p>To save keystrokes, the system has been designed to accept some abbreviations. The user is able to abbreviate information which has already been entered into the system. The user may not, however, abbreviate new information, such as a new patient's name.</p> <p>Do not use contractions or remove letters from the middle of a word. Abbreviations are only acceptable that eliminate characters from the end of a word or phrase. For example, the word ONCOLOGY may be abbreviated correctly as O, ON, ONC, ONCO and so on. Incorrect ways of abbreviating the same word would be OC, ONCY, ONGY, etc.</p> <p>Sometimes an abbreviation does not uniquely identify a response because two or more acceptable answers begin with the same letters the user has entered. In this case, the system responds by displaying a numbered list of all possibilities matching his abbreviated response.</p> <p>For example, if for the patient name STAUFFER,JOHN the user enters:</p> <p>Select PATIENT NAME: <u>STA</u></p> <p>The following list may appear:</p>

```

1   STACK,DONALD   132784732
2   STADLER,JEFFERY 372823319
3   STAG,NORMAN P   338274355
4   STAGGER,LEE     330299183
5   STANWICK,DAVID  440398290

```

TYPE '^' TO STOP, OR CHOOSE 1-5: RETURN

Because his choice (STAUFFER,JOHN) is not in the first five entries of the list, the user would press RETURN for the list to continue.

```

6   STARKY,WILLIAM 987654321
7   STAS,GERALD N   123456789
8   STASCHEK,JAMES 111223333
9   STASH, REGINALD 222334444
10  STAUFFER,JOHN  333445555

```

TYPE '^' TO STOP, OR CHOOSE 6-10: 10

Had his choice not been included in 6-10, the user could have entered RETURN to continue or an up-arrow <^> to quit.

#### Space Bar

If the user responds to a prompt he has answered earlier and wishes to respond with the same information, he may usually do so by entering <SPACE BAR> RETURN. For example, if the user enters JONES,JILL at the "Select PATIENT" prompt, exits the function then re-enters, he may enter JONES,JILL again by entering <SPACE BAR> then RETURN.

#### Entering Dates

Dates may be entered into the system in a number of ways. Incomplete dates can sometimes be entered; for instance, the user may leave out the year and the system assumes the user means the current year.

Some acceptable ways of entering dates are (for MAY TWENTIETH, NINETEEN-HUNDRED-EIGHTY-SIX):

MAY 20,1986 or May 20, 1986  
 5/20/1986 or 5-20-1986, or 5\*20\*1986  
 05201986 or 052086  
 20 MAY 86 OR 20 May 86

Other ways of entering dates are dependent on the system's record of today's date. For example:

T (for TODAY)  
 T+1 or +1 (for tomorrow)  
 T-1 or -1 (for yesterday)  
 T-(a number) or T+(a number) to indicate a day in the past or future  
 T-(a number)W to indicate a number of weeks in the past

Entering Times	<p>Times can be entered using the usual format or the system will also accept military time. Acceptable time formats are:</p> <p>1600 or 16:00 (military time for 4PM) 4 PM or 4 AM 4:00 PM or 4:00 AM 4 (if the time falls between 6:00AM and 6:00PM)</p>
Entering Date/Time	<p>The user may enter a date and time combined by using an at-sign &lt;@&gt; between them. For example:</p> <p>LOG OUT DATE/TIME: <u>T-1@16:00</u></p> <p>As shown above, do not leave spaces between date, at-sign and time.</p>
Entry of Patient Names	<p>There are several acceptable methods of retrieving patient names already in the system. They are listed below in order of most desirable to least desirable.</p> <p>FIRST LETTER OF LAST NAME AND LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER</p> <p>The first and most desirable method of calling a patient name is FIRST LETTER OF LAST NAME and LAST FOUR DIGITS OF SSN. Do not leave a space or enter punctuation between the initial and the SSN. To recall JOHNSTON,BRUCE, whose social security number is 111-22-3333, type:</p> <p>Select PATIENT NAME: <u>J3333</u></p> <p>LAST NAME, FIRST NAME</p> <p>The user may call up a patient by entering LAST NAME COMMA FIRST NAME. Do not use the middle initial, as it may not have been entered the first time. For example:</p> <p>Select PATIENT NAME: <u>STAUFFER,JOHN</u></p> <p>LAST NAME AND FIRST INITIAL</p> <p>A name may be recalled as LAST NAME COMMA FIRST INITIAL. For example:</p> <p>Select PATIENT NAME: <u>STAUFFER,J</u></p> <p>LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER</p> <p>The user may call up a patient name by entering only the last four digits of the SSN. For CARR,IAN whose SSN is 222-33-4444, enter:</p> <p>Select PATIENT NAME: <u>4444</u></p> <p>The user may get a list of patients with the same last four digits in their SSN from which to choose the correct entry.</p>

**Using the Edit Option** Within certain options are word processing fields which provide an edit capability. This allows the user to edit previously entered text. It is the same type of line editor used in the electronic MailMan system.

The system will display the text with each line assigned a number. To get the list of EDIT options, enter a <?> at the "Select EDIT OPTION" prompt.

Options should be accessed by the first letter of the desired option. Use combinations of various options for efficient editing. An example of editing previously entered text:

```
SUPERVISOR COMMENTS
1> PATIENT'S LAST EMG SHOWED ABNORMALITIES.  IF HE
2> REPORTS FOR MEDICAL TREATMENT, HE SHOULD BE
3> REFERRED TO THE CARDIOLOGY DEPARTMENT.
EDIT OPTION: ?
CHOOSE, BY FIRST LETTER, ONE OF THE FOLLOWING:
Add Lines to End of Text
Break a Line into Two
Change Every String to Another in a Range of Lines
Delete Line (s)
Edit a Line (Replace --- With ---)
Insert Line(s) after an Existing Line
Join Line to the One Following
List a Range of Lines
Move lines to a New Location Within Text
Print Lines as Formatted Output
Repeat Lines at a New Location
Search for a String
Transfer Lines from Another Document
OR TYPE A LINE NUMBER TO EDIT THAT LINE
EDIT Option: Edit line: 1
    1> PATIENT'S LAST EMG SHOWED ABNORMALITIES.
Replace EMG With EKG Replace RETURN
    PATIENT'S LAST EKG SHOWED ABNORMALITIES.
Edit line: RETURN
EDIT Option: RETURN
```

**Changing/Deleting Information**

Previously entered data may be changed (edited) or deleted. In order to change/delete previously entered information, the user must first know how to move around within a function.

Sometimes the user may skip a prompt by entering RETURN at the prompt. However, he will be unable to skip a prompt which requires an answer in order to continue within the option. In this case, an up-arrow <^> may be entered which will usually return the user to the menu. He could then re-enter and go through the option until he reaches the desired prompt.

In some instances, the user may move from the prompt on which he is currently to an earlier or later prompt in the same option. He may do this by entering an up-arrow <^> and the text of the prompt to which he wishes to move. For example, if at the ADDRESS prompt he decides to return to the NAME prompt, he would enter:

ADDRESS: ^NAME

When the NAME prompt appears, his last response should appear as the default.

NAME: STAUFFER,JOHN S//

#### Changing a Response

One way to change his response is to type in the new information after the slashes. For example, to change the above response, the user might enter:

NAME: STAUFFER,JOHN S// STOUFFER,JOHN S

#### Responding to the

#### Replace Prompt

For a section of text in excess of 20 characters, the system allows the

user to change selected characters by displaying the "Replace" prompt rather than the double slashes. The user may change selected characters of text only if the system displays the prompt "Replace" after the information has been entered.

IF THE USER WANTS TO CHANGE ... THEN ENTER ...

a few selected characters	the characters the user wants to replace after the prompt "Replace" and the new characters the user wish to enter after the prompt "With"
---------------------------	---

EXAMPLE: Congestive heart failure Replace failure With disease  
Replace RETURN  
Congestive heart disease

the entire response	3 dots (...) after the prompt "Replace" and the new text the user wish to enter after the prompt "With"
---------------------	---

EXAMPLE: Congestive heart failure Replace ...  
With Coronary artery disease  
Replace RETURN  
Coronary artery disease

#### Deleting a Response

To delete a previously entered response in its entirety, enter an at-sign <@> after the double slashes.

STREET ADDRESS: 34 PINE STREET// @

The system will respond with a message asking if the user is sure he wants to delete the entire entry. Note that an entry is required for some fields and may not be deleted, only edited.

#### Completing a Function

Although most options do not require that the user completes the entire function in order to exit, if data has been entered into the system to be saved in a file, leaving the file incomplete creates an

inconsistent/incomplete data situation. The function should be completed by responding as accurately as possible to each prompt the user encounters.

#### Exiting a Function

When the user has completed a function, the user will most likely see the first prompt again or the system will ask the user to take an action such as choosing a device on which to print. Occasionally, when he completes a function, entering RETURN will take him out of the function and return to the menu.

Usually, if a RETURN or up-arrow <^> is entered at the first prompt of an option, the user will return to the menu. The <^> key can be used to exit an option or enter consecutive RETURNS at the prompts he encounters. However, he may encounter a prompt which requires an answer and will not accept a RETURN. An up-arrow <^> entered at this prompt will usually allow the user to exit.

## 2.3. HOW TO SIGN ON TO THE COMPUTER

The Radiology Computer Expert will set up individual user accounts on the computer and inform the user of his ACCESS CODE and VERIFY CODE. These codes are special alphabetic and numeric characters assigned to the user so that the computer system can recognize the user as a specific user. No two users will have the same access and verify codes. Since these codes are designed to prevent unauthorized use of the Radiology Software, he should keep these codes confidential. When signing onto the system, he must enter his access and verify codes. The example below shows how to sign on to the computer.

Note that each staff member may have a different main menu - one that has been tailored for his specific job function. The illustration shown below is an example of a main menu for a Radiologist Computer Expert.

**Enter the Radiology Software. (Site specific information goes here.)**  
**Each site is different. See the Radiology Computer Expert.**

```
ACCESS CODE: <HIDDEN>      (TYPE IN HIS SECRET ACCESS CODE)
VERIFY CODE: <HIDDEN>      (TYPE IN HIS SECRET VERIFY CODE)
GOOD MORNING (PERSON'S NAME)   THE USER LAST SIGNED ON DEC 12,1992 AT 09:31
SITE SET TO ANCH MED CTR

MCH  MATERNAL AND CHILD HEALTH
RAD  RADIOLOGY TOTAL SYSTEM MENU          (EXAMPLE OF MAIN MENU)
MC   MANAGED CARE INFORMATION SYSTEM

SELECT MAIN MENU OPTION:  RADIOLOGY TOTAL SYSTEM MENU  RETURN
```

The user is now ready to select the proper menu(s) to perform his specific job function as described in the next section.

## 2.4. HOW TO USE THE MENUS TO SELECT THE APPROPRIATE FUNCTION

After signing onto the system, an individual's main menu options will appear on the terminal screen. Each user will see only those menus and options that he is authorized to use. The example below shows how to:

- start with the main menu shown in Section 2.3,
- access the Radiology Total System Menu,
- access the Exam Entry/Edit Menu, and
- access the Register Patient for Exams Menu.

Also, see ACCESSING A FUNCTION in Section 2.2.

```
MCH  MATERNAL AND CHILD HEALTH
RAD  RADIOLOGY TOTAL SYSTEM MENU
MC   MANAGED CARE INFORMATION SYSTEM
```

```
SELECT MAIN MENU OPTION: RADIOLOGY TOTAL SYSTEM MENU RETURN
```

```
EXAM ENTRY/EDIT MENU
FILMS REPORTING MENU
MANAGEMENT REPORTS MENU
OUTSIDE FILMS REGISTRY MENU
PATIENT PROFILE MENU
RADIOLOGY ORDER ENTRY MENU
SUPERVISOR MENU
UPDATE PATIENT RECORD
USER UTILITY MENU
```

```
SELECT RADIOLOGY TOTAL SYSTEM MENU OPTION: EXAM ENTRY/EDIT MENU
```

```
ADD EXAMS TO LAST VISIT
CANCEL AN EXAM
DIAGNOSTIC CODE ENTRY BY CASE NO.
EDIT EXAM BY PATIENT OR CHART #
ENTER LAST PAST VISIT BEFORE DHCP
REGISTER PATIENT FOR EXAMS
STATUS TRACKING OF EXAMS
VIEW EXAM BY CASE NO.
```

```
SELECT EXAM ENTRY/EDIT MENU OPTION: REGISTER PATIENT FOR EXAMS
```

```
SELECT PATIENT NAME: (NO MORE MENUS, TIME TO ENTER DATA)
```

## 2.5. HOW TO SIGN OFF THE COMPUTER

To exit the system from any menu, continue to press RETURN until the user exits from the Radiology Software, as shown in the example below. Note that the user is exiting from the "Select PATIENT NAME" prompt within the Register Patient for Exams option of the Exam Enter/Edit Menu.

If the user does not exit from the system, and if he does not use his terminal for a specified amount of time (usually 5 minutes), the system will, as a security precaution, automatically sign him off the system. The specified amount of time is set by the Radiology Computer Expert for each user.

```
SELECT PATIENT NAME: RETURN      (BACK TO PREVIOUS MENU)

EXAM ENTRY/EDIT MENU
FILMS REPORTING MENU
MANAGEMENT REPORTS MENU
OUTSIDE FILMS REGISTRY MENU
PATIENT PROFILE MENU
RADIOLOGY ORDER ENTRY MENU
SUPERVISOR MENU
UPDATE PATIENT RECORD
USER UTILITY MENU

SELECT RADIOLOGY TOTAL SYSTEM MENU OPTION: RETURN
                                           (BACK TO PREVIOUS MENU)

FEE BASIS MAIN MENU
RADIOLOGY TOTAL SYSTEM MENU
WORD PROCESSING

SELECT MAIN MENU OPTION: RETURN

(THERE IS NO PREVIOUS MENU EXIT THE RADIOLOGY SOFTWARE)
```

### 3. PERFORMING JOB FUNCTIONS

The staff members of the IHS Radiology Departments are the heart of the IHS Radiology Software System. These individuals perform the actions required for the examinations of patients to take place and for the distribution of the resulting information to the requesting physicians and other individuals. This Section describes the heart of the Radiology Software - those features which support staff members in performing their jobs.

In Section 1, the basic flow of work and identification of data which must be created at each step was addressed that so information can be passed into the system for use by others in later steps. In this section, the user will learn to use the Radiology Software to record and access the required information in each basic job function. The job functions organized this section are the same as described in Section 1.

1. Registering a patient for an examination;
2. Editing/updating an examination record;
3. Transcribing an examination report;
4. Verifying an examination report;
5. Viewing a patient's record; and
6. Displaying and viewing a request.

This Section will describe how to use the Radiology Software to perform each of the six job functions listed above. The figure on the next page is a flowchart containing these functions.

The examples provided in this Section assume that the user is accessing the Radiology Software through the Radiology Total System Menu. His starting menu may be different, depending on his job function and on site policies, but his starting menu will list the options required for his job function. For example, reviewing Section 3.1.1, the user's starting menu will (1) allow the user to choose the Exam Entry/Edit Menu, (2) allow him to choose Register Patient for Exams directly or (3) neither, as his job function does not require it.

#### 3.1. REGISTERING A PATIENT FOR AN EXAMINATION

For each patient, the first action will be to register him. This step provides such information as the patient's name, the requesting doctor, and the requested procedure. Patient registration should not be performed until the patient is physically onsite, at the Radiology Department. Within the Radiology Software, there are two methods which can be used to register a patient.

**ONE STEP METHOD** - This method is shown in Section 3.1.1. This method essentially combines the two steps in the other method into one larger step: Registering the patient for an examination.

**TWO STEP METHOD** - This method is described in Sections 3.1.2 and 3.1.3. Registration is broken into two smaller steps. This method is used for "Ward Order Entry," where providers in the wards and clinics enter the requests, while registration is done in Radiology.

1. Requesting an examination
2. Registering the patient for an examination

Whatever method is used, the patient must have been previously entered into the RPMS system. Most sites prefer the ONE STEP method. If true at his site, the user can ignore these two sections.

NOTE: The patient's last name is DEMO.

### 3.1.1. Registering Patient for an Examination (One Step)

The following example shows how to register a patient in one step, essentially combining request-schedule-register into one step. The action begins with the computer prompting the user which patient to register (Select Radiology Patient). It then displays some of the information already on file from the RPMS system. Next, it prompts to provide the registration information for this particular examination. Input includes registration date & time, patient location, requesting provider, procedure and modifiers and clinical history. The Radiology Software automatically assigns a case number. The figure at the end of Section 3.1 contains a flowchart for registering a patient.

**MENU PATH: Exam Entry/Edit Menu  
Register Patient for Exams**

```

SELECT RADIOLOGY PATIENT: DEMO,PATIENT   M 12-01-45 123731795   840996
...OK? YES// RETURN (YES)

***** PATIENT DEMOGRAPHICS *****

NAME : DEMO,PATIENT
CHART #   : 84-09-96
DATE OF BIRTH : DEC 1, 1945 (47)
VETERAN   : UNKNOWN ELIGIBILITY : UNKNOWN
SEX      : MALE

OTHER ALLERGIES:
      'V' DENOTES VERIFIED ALLERGY   'N' DENOTES NON-VERIFIED ALLERGY

** NO ALLERGIES ON FILE. **
LAST FIVE PROCEDURES  EXAM DATE  STATUS OF EXAM  IMAGING LOC
-----
ESOPHAGUS             NOV 16,1992  COMPLETE        RADIOLOGY DE
MAMMOGRAM UNILAT      NOV 16,1992  COMPLETE        RADIOLOGY DE

RADIOLOGY EXAM DATE/TIME: NOW// RETURN (JAN 05, 1993@16:09)

                **** REQUESTED EXAMS FOR DEMO,PATIENT ****                2

REQUESTS
  ST URGENCY  PROCEDURE  REQ DT  REQUESTOR  LOCATION
-----
1 P  ROUTINE  BA SWALLOW  11/17  GIVER,CAREY  DAY SURGERY

SELECT REQUEST(S) 1-1 TO SCHEDULE OR '^' TO EXIT: EXIT// RETURN
DO THE USER WANT TO REQUEST AN EXAM FOR DEMO,PATIENT? NO// YES

...REQUESTING AN EXAM FOR DEMO,PATIENT...

PATIENT LOCATION: DAY SURGERY (DEFINED AS REQUESTING RADIOLOGY LOCATION)
REQUESTING PROVIDER: MEDICAL,DOCTOR (PHYSICIAN REQUESTING EXAMINATION)
PCC DATE: TODAY// RETURN
PCC TIME:15:30      NOTE: THESE PCC ITEMS WILL APPEAR ONLY IF THE
                        "ASK PCC DATE/TIME" PARAMETER IS SET TO "YES".
                        (DIVISION PARAMETER SETUP MENU UNDER SYSTEM DEFINITION)

```

COMMON RADIOLOGY PROCEDURES

1) CHEST 2 VIEWS PA&LAT	17) SHOULDER 2 OR MORE VIEWS
2) CHEST SINGLE VIEW	18) SPINE CERVICAL MIN 4 VIEWS
3) SMALL BOWEL FOLLOW THRU	19) SPINE THORACIC AP&LAT&SWIM VIEWS
4) BA SWALLOW	20) SPINE LUMBOSACRAL MIN 2 VIEWS
5) UPPER GI + SMALL BOWEL	21) NECK SOFT TISSUE
6) UPPER GI W/O KUB	22) BREAST SPECIMEN
7) COLON BARIUM ENEMA	23) MAMMOGRAM UNILAT
8) VCUG	24) MAMMOGRAM BILAT
9) RETROGRADE URETHROGRAM	25) LONG LEG VIEW
10) IVP & TOMOS	26) SINUSES 3 OR MORE VIEWS
11) CYSTOGRAM MIN 3 VIEWS S&I	27) BILIARY STINT PLACEMENT
12) PELVIC U/S	28) BILIARY STINT EXCHANGE
13) ABD U/S	29) ANKLE 3 OR MORE VIEWS
14) OB US	30) FOOT 3 OR MORE VIEWS
15) RENAL U/S	31) ABDOMEN-KUB
16) CAROTID U/S	32) ACUTE ABDOMEN

SELECT PROCEDURE (1-32): 32

NOTE: IT IS POSSIBLE HERE TO SELECT MULTIPLE PROCEDURES SEPARATED BY COMMAS.  
IT IS ALSO POSSIBLE TO SELECT PROCEDURES.

PROCESSING PROCEDURE: ACUTE ABDOMEN NOT LISTED. (E.G. WRIST)

SELECT MODIFIERS: RIGHT

SELECT MODIFIERS: RETURN

CLINICAL HISTORY FOR EXAM

1> PLAYING IN A FOOTBALL GAME.

2> RETURN

EDIT OPTION: RETURN

-----  
PATIENT: DEMO,PATIENT

PROCEDURE: ACUTE ABDOMEN

MODIFIERS: RIGHT

CATEGORY: OUTPATIENT MODE OF TRANSPORT: AMBULATORY

REQUESTED DATE: TODAY ISOLATION PROCEDURES: NO

REQUESTED URGENCY: ROUTINE SCHEDULED FOR PRE-OP: NO

CLINICAL HISTORY:

PLAYING IN A FOOTBALL GAME.

-----  
DO THE USER WANT TO EDIT THIS REQUEST? NO// RETURN

...WILL NOW REGISTER DEMO,PATIENT WITH THE NEXT CASE NUMBER...

CASE NUMBER: 12

RADIOLOGY PROCEDURE: ACUTE ABDOMEN// RETURN

1 ACUTE ABDOMEN(DETAILED) CPT:74022

2 ACUTE ABDOMEN MIN 3 VIEWS+CHEST(SERIES) CPT:74022

CHOOSE 1-2: 2 ABDOMEN MIN 3 VIEWS+CHEST

SELECT MODIFIERS: RIGHT// RETURN

CATEGORY OF EXAM: OUTPATIENT// RETURN

CLINIC: DAY SURGERY// RETURN

DO YOU WISH TO PRINT A FLASHCARD? YES// RETURN

SELECT DEVICE TO PRINT FLASHCARDS: DEV-33//RETURN

DO YOU WISH TO PRINT A WORKSHEET? YES// RETURN

DEVICE: REPORT-P// RETURN PARALLEL PORT RIGHT MARGIN: 80// RETURN

SELECT PATIENT NAME: RETURN

Illustration: (Worksheet is shown on next page)

```

>>> Radiology Consultation <<<                JAN 5,1993  16:09
=====
Name           :DEMO,PATIENT                    Urgency    :ROUTINE
Chart#         :94-09-96                        Transport  :AMBULATORY
Date of Birth  :DEC 1,1945                      Patient Loc  :DAY SURGERY
Age            :47                              Phone Ext   :
=====

Procedures:    ACUTE ABDOMEN
Modifiers:      RIGHT

Request Status: ACTIVE
Exam Status:    WAITING FOR EXAM

Requesting Provider:MEDICAL,DOCTOR

Date/Time Ordered:  JAN 5,1993  16:07 by GREETUM,GRETA (Automatic: Time of
request)
Date Desired:      JAN 5,1993      Requested date - when do we want to do the
exam Radiology Exam Date/Time)

Clinical History:
  Playing in a football game.
-----
Date Performed:_____ Case No.:12
Technologist Initials:
Number/Size Films:
_____
Comments:
-----

Last Five Procedures      Exam DateStatus of Exam      Imaging Loc.
ABDOMEN MIN 3 VIEWS+CHEST JAN  5,1993  WAITING FOR      RADIOLOGY DE
ESOPHAGUS                 NOV 16,1992  COMPLETE         RADIOLOGY DE
MAMMOGRAM UNILAT          NOV 16,1992  COMPLETE         RADIOLOGY DE
-----

```

### 3.1.2. Requesting an Examination

Section 3.1.1 shows how to register a patient in one step, essentially combining the request-and-register options into one. This section shows how to perform just the Request an Exam option - the first step of the two-step method. In the example below, the computer prompts the user for the identity of the patient for whom he is requesting an exam, the patient's location, and the requesting physician. It then prints the last five procedures for this patient. After that, it prompts the user for the procedure being requested this time, any modifiers, and the clinical history. Notice that at the end, as in most options, the user may edit his input in case he made a mistake, or if he wishes to change certain defaults such as mode of transport, isolation, pregnant, pre-op, etc.

#### MENU PATH: Radiology Order Entry Menu Request an Exam

```
SELECT PATIENT NAME: DEMO,PATIENT  M 12-01-45 123731795 840996
PATIENT LOCATION: DAY SURGERY (WARD OR CLINIC)
PERSON REQUESTING ORDER: MEDICAL, DOCTOR (PHYSICIAN REQUESTING
EXAMINATION)
```

```
PCC DATE: TODAY// RETURN NOTE: THESE PCC ITEMS WILL APPEAR ONLY IF THE
PCC TIME: 11:15 "ASK PCC DATE/TIME" PARAMETER IS SET TO "YES".
```

LAST FIVE PROCEDURES	EXAM DATE	STATUS OF EXAM	IMAGING LOC
ESOPHAGUS	NOV 16,1992	COMPLETE	RADIOLOGY DE
MAMMOGRAM UNILAT	NOV 16,1992	COMPLETE	RADIOLOGY DE

PRESS RETURN KEY TO CONTINUE.

#### SIMULATED PAGE BREAK

#### COMMON RADIOLOGY PROCEDURES

- |                               |                                      |
|-------------------------------|--------------------------------------|
| 1) CHEST 2 VIEWS PA&LAT       | 17) SHOULDER 2 OR MORE VIEWS         |
| 2) CHEST SINGLE VIEW          | 18) SPINE CERVICAL MIN 4 VIEWS       |
| 3) SMALL BOWEL FOLLOW THRU    | 19) SPINE THORACIC AP&LAT&SWIM VIEWS |
| 4) BA SWALLOW                 | 20) SPINE LUMBOSACRAL MIN 2 VIEWS    |
| 5) UPPER GI + SMALL BOWEL     | 21) NECK SOFT TISSUE                 |
| 6) UPPER GI W/O KUB           | 22) BREAST SPECIMEN                  |
| 7) COLON BARIUM ENEMA         | 23) MAMMOGRAM UNILAT                 |
| 8) VCUG                       | 24) MAMMOGRAM BILAT                  |
| 9) RETROGRADE URETHROGRAM     | 25) LONG LEG VIEW                    |
| 10) IVP & TOMOS               | 26) SINUSES 3 OR MORE VIEWS          |
| 11) CYSTOGRAM MIN 3 VIEWS S&I | 27) BILIARY STINT PLACEMENT          |
| 12) PELVIC U/S                | 28) BILIARY STINT EXCHANGE           |
| 13) ABD U/S                   | 29) ANKLE 3 OR MORE VIEWS            |
| 14) OB US                     | 30) FOOT 3 OR MORE VIEWS             |
| 15) RENAL U/S                 | 31) ABDOMEN-KUB                      |
| 16) CAROTID U/S               | 32) ACUTE ABDOMEN                    |

SELECT PROCEDURE (1-32): 32

PROCESSING PROCEDURE: ACUTE ABDOMEN

```
SELECT MODIFIERS: RIGHT
SELECT MODIFIERS: RETURN
CLINICAL HISTORY FOR EXAM
  1> PLAYING IN A FOOTBALL GAME.
  2> RETURN
EDIT OPTION: RETURN

-----

PATIENT: DEMO,PATIENT
PROCEDURE:ACUTE ABDOMEN
MODIFIERS:RIGHT
CATEGORY: OUTPATIENTMODE OF TRANSPORT: AMBULATORY
REQUESTED DATE:TODAY ISOLATION PROCEDURES: NO
REQUESTED URGENCY: ROUTINE SCHEDULED FOR PRE-OP: NO

CLINICAL HISTORY:
PLAYING IN A FOOTBALL GAME.

-----

DO THE USER WANT TO EDIT THIS REQUEST? NO// YES
RADIOLOGY PROCEDURE: ACUTE ABDOMEN// RETURN
SELECT MODIFIERS: RIGHT// RETURN

CLINICAL HISTORY REQUIRED

CLINICAL HISTORY FOR EXAM:
1> PLAYING IN A FOOTBALL GAME
EDIT OPTION: RETURN
CATEGORY OF EXAM: OUTPATIENT// RETURN
IS PATIENT SCHEDULED FOR PRE-OP? NO//
REQUESTED DATE (TIME OPTIONAL): TODAY// RETURN (JAN 05,1993)
MODE OF TRANSPORT: AMBULATORY// RETURN
IS PATIENT ON ISOLATION PROCEDURES? NO// RETURN
REQUEST URGENCY: ROUTINE// RETURN

SELECT PATIENT NAME: RETURN
```

### 3.1.3. Registering Patient For an Examination (Step 2)

This option is the second step of the two-step method. The following example shows how to register a patient for an examination, assuming that the patient has already been processed through the REQUEST step.

**MENU PATH:** Exam Entry/Edit Menu  
Register Patient for Exams

```

SELECT RADIOLOGY PATIENT: DEMO,PATIENT   M 12-01-45 123731795   840996
...OK? YES// RETURN (YES)

***** PATIENT DEMOGRAPHICS *****
NAME : DEMO,PATIENT
CHART #   : 84-09-96
DATE OF BIRTH : DEC 1, 1945 (47)
VETERAN   : UNKNOWN ELIGIBILITY : UNKNOWN
SEX      : MALE

OTHER ALLERGIES:
'V' DENOTES VERIFIED ALLERGY   'N' DENOTES NON-VERIFIED ALLERGY

** NO ALLERGIES ON FILE. **
LAST FIVE PROCEDURES EXAM DATE STATUS OF EXAM IMAGING LOC
ESOPHAGUS           NOV 16, 1992 COMPLETE           RADIOLOGY DE
MAMMOGRAM UNILAT    NOV 16, 1992 COMPLETE           RADIOLOGY DE

RADIOLOGY EXAM DATE/TIME: NOW// RETURN (JAN 05, 1993@16:09)

**** REQUESTED EXAMS FOR DEMO,PATIENT ****           2 REQUESTS

      ST  URGENCY  PROCEDURE REQ DT  REQUESTOR LOCATION
1      S   ROUTINE  ACUTE ABDOMEN  01/05  MEDICAL,DOC    DAY SURGERY
2      P   ROUTINE  BA SWALLOW11/17  GIVER,CAREDAY  SURGERY

SELECT REQUEST(S) 1-2 OR '^' TO EXIT: EXIT// 1

...WILL NOW REGISTER DEMO,PATIENT WITH THE NEXT CASE NMBR...

CASE NUMBER: 12
RADIOLOGY PROCEDURE: ACUTE ABDOMEN// RETURN
1      ACUTE ABDOMEN (DETAILED)           CPT:74022
2      ACUTE ABDOMEN MIN 3 VIEWS+CHEST (SERIES) CPT:74022
CHOOSE 1-2: 2 ABDOMEN MIN 3 VIEWS+CHEST
CATEGORY OF EXAM: OUTPATIENT// RETURN
CLINIC: DAY SURGERY// RETURN

DO YOU WISH TO PRINT A FLASHCARD? YES// RETURN
SELECT DEVICE TO PRINT FLASHCARDS: DEV-33//RETURN
DO YOU WISH TO PRINT A WORKSHEET? YES// YES

DEVICE: REPORT-P// RETURN PARALLEL PORT      RIGHT MARGIN: 80// RETURN

SELECT PATIENT NAME: RETURN

```

Illustration: (See Worksheet in 3.1.1 Register Patient for Examination (One Step))

### 3.2. EDITING/UPDATING AN EXAMINATION

After registration, the radiology examination will take place. A radiology technologist, with worksheet in hand, will perform the examination and update the worksheet. When the examination is completed, the technologist will access the radiology software and edit the examination record based on the worksheet information. The technologist enters data regarding the examination and notes any complications that may have occurred. Input includes film sizes, quantity of films, status of the patient, and exam complications. The figure below contains a flowchart for entering and editing an examination.

**MENU PATH:**    **Exam Entry/Edit Menu**  
                  **Exam Edit**

```
LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?
  SELECT ONE OF THE FOLLOWING:

      C      CASE NUMBER
      P      PATIENT NAME OR CHART#

ENTER RESPONSE: C// RETURN ASE NUMBER

ENTER CASE NUMBER: 12

RADIOLOGY PROCEDURE: ABDOMEN MIN 3 VIEWS+CHEST// RETURN
SELECT MODIFIERS: RETURN
CATEGORY OF EXAM: OUTPATIENT// RETURN
CLINIC: DAY SURGERY// RETURN
REQUESTING PROVIDER: MEDICAL, DOCTOR// RETURN
SELECT TECHNOLOGIST: TECHNICIAN, TAMMY
SELECT TECHNOLOGIST: RETURN
COMPLICATION: NO COMPLICATION// RETURN
PRIMARY EXAM ROOM: PORTABLE    PORTABLE X-RAY DEVICE
SELECT FILM SIZE: 14X17 (35X43CM)// RETURN
  FILM SIZE: 14X17 (35X43CM)// RETURN
  TOTAL NUMBER USED(#FILMS OR CINE FT): 3// RETURN
  NUMBER OF REPEATS: RETURN
SELECT FILM SIZE: RETURN

...WILL NOW DESIGNATE EXAM STATUS AS 'EXAMINED'...
  ...EXAM STATUS SUCCESSFULLY UPDATED.
  UNABLE TO CREDIT A RADIOLOGY CLINIC STOP!

LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?
  SELECT ONE OF THE FOLLOWING:

      C      CASE NUMBER
      P      PATIENT NAME OR CHART#

ENTER RESPONSE: C// RETURN ASE NUMBER
ENTER CASE NUMBER: RETURN
```

### 3.3. TRANSCRIBING AN EXAMINATION REPORT

**A manual process step must take place prior to the execution of this option.** A radiologist must review the results of the examination and either dictate or write his findings into a report. The report must then be passed to the transcriptionist who will type the report into the Radiology Software's examination record; although the radiologist has the option of transcribing the report directly into the computer.

Using the report materials from the radiologist, the transcriptionist creates and/or edits a report for the respective request/examination. The most significant inputs added by the transcriptionist are the "report text" and the "impression text." If no impression text is entered, the report will be put into a Problem Draft report status and delay the reports arrival to the physician. Transcribed reports will then be reviewed by the radiologist for completeness and accuracy, see *Section 3.4 - Verifying an Examination Report*.

At the completion of this option, the request and examination statuses reflect an Active status. The report status can be Draft, Problem Draft or Released. The report is now ready for radiologist verification.

**MENU PATH:**    **Films Reporting Menu**  
                    **Report Entry/Edit**

```
DO YOU WANT TO WORK IN BATCH MODE? YES// N ...NO BATCH SELECTED

LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?
  SELECT ONE OF THE FOLLOWING:

      C      CASE NUMBER
      P      PATIENT NAME OR CHART#

ENTER RESPONSE: C// PATIENT NAME OR CHART#

SELECT RADIOLOGY PATIENT: DEMO,PATIENT           M 12-01-45 123731795      840996

**** CASE LOOKUP BY CHART# ****
PATIENT'S NAME: DEMO,PATIENT  #84-09-96           RUN DATE: JAN   8,1993

  CASE  PROCEDURE          EXAM DATE  STATUS OF REPORT
  ---  -
1    12  ABDOMEN MIN 3      JAN 5,1993  NO REPORT
      VIEWS+CHEST
2     4   ESOPHAGUS         NOV 16,1992 VERIFIED
3     3   MAMMOGRAM UNILAT  NOV 16,1992 VERIFIED

TYPE '^' TO STOP, OR
CHOOSE FROM 1-3: 1

-----
NAME       :DEMO,PATIENT  CHART #       : 84-09-96
CASE NO.   :12    PROCEDURE   : ABDOMEN MIN 3 VIEWS+CHEST
EXAM DATE:   JAN 5,1993 16:09  TECHNOLOGIST:  TECHNICIAN,TAMMY
REQ PROVIDER:  MEDICAL,DOCTOR
-----
...REPORT NOT ENTERED FOR THIS EXAM...
...WILL NOW INITIALIZE REPORT ENTRY...
STAFF RADIOLOGIST: RADIOLOGIST,RHONDA
-----
SELECT 'STANDARD' REPORT TO COPY: RETURN
```

-----  
REPORTED DATE: NOW (JAN 08,1993)  
-----

CLINICAL HISTORY:  
1>PLAYING IN A FOOTBALL GAME.  
2>RETURN  
EDIT OPTION:RETURN  
-----

REPORT TEXT:  
1>ALL REPORT TEXT ADDED HERE.  
2>RETURN  
EDIT OPTION:RETURN  
-----

IMPRESSION TEXT:  
1>THIS IS THE IMPRESSION TEXT.  
2>RETURN  
EDIT OPTION:RETURN  
-----

REPORT STATUS: DRAFT// RETURN  
...WILL NOW DESIGNATE EXAM STATUS AS 'TRANSCRIBED'...  
...EXAM STATUS SUCCESSFULLY UPDATED.  
UNABLE TO CREDIT A RADIOLOGY CLINIC STOP!

DO YOU WISH TO PRINT THIS REPORT? NO// RETURN

LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?  
SELECT ONE OF THE FOLLOWING:

C	CASE NUMBER
P	PATIENT NAME OR CHART#

ENTER RESPONSE: C// RETURN ASE NUMBER

ENTER CASE NUMBER: RETURN

### 3.4. VERIFYING AN EXAMINATION REPORT

Once the transcriptionist has prepared a set of reports, the radiologist can review the reports for completeness and accuracy. Usually the reports will arrive with a Draft report status. If all is well, the radiologist reviews them and changes the report status to VERIFIED and is ready for the physician to review. If it is not ready for verification, the radiologist may edit the report himself or return it to the transcriptionist, with the desired changes documented. The following figure contains the flowchart for verifying an examination report.

At completion of this option, the request and examination statuses are changed to COMPLETE and the report becomes available for physician review.

**MENU PATH:**      **Films Reporting Menu**  
**Online Verifying of Reports**

```

ENTER ELECTRONIC SIGNATURE CODE: <HIDDEN>

SELECT RADIOLOGIST: RADIOLOGIST,RHONDA// RETURN

DO YOU WISH TO REVIEW ALL 3 REPORTS? YES// NO
CASE  PROCEDURE                EX DATE    NAME
-----
1  12  ABDOMEN MIN 3           01/05/93  DEMO,PATIENT 84-09-96
      VIEWS+CHEST
2   4   ESOPHAGUS             11/16/92  DEMO,PATIENT 84-09-96
3   3   MAMMOGRAM UNILAT      11/16/92  DEMO,PATIENT 84-09-96

TYPE '^' TO STOP, OR
CHOOSE FROM 1-3: 1

NAME :DEMO,PATIENT  CHART #   :84-09-96
PROCEDURE :ABDOMEN MIN 3 VIEWS+CHEST  EXAM DATE :JAN  5,1993  16:09
REQ PROVIDER   :MEDICAL,DOCTORCASE NO.  :12
STAFF RAD :RADIOLOGIST,RHONDA
=====
EXAM MODIFIERS :NONE

CLINICAL HISTORY:
PLAYING IN A FOOTBALL GAME.

REPORT:                                STATUS: DRAFT
ALL REPORT TEXT SHOULD BE HERE
IMPRESSION:
THIS IS THE IMPRESSION TEXT.
=====
*** END OF REPORT ***

ENTER RESPONSE: CONTINUE// RETURN
REPORT STATUS: DRAFT// V VERIFIED
STATUS UPDATE QUEUED!

```

DO YOU WISH TO VERIFY REPORTS FOR OTHER RADIOLOGISTS? NO// RETURN

MENU OMITTED

SELECT RADIOLOGIST'S MENU OPTION: RETURN

### 3.5. REQUESTING PROVIDER VIEWING A PATIENT'S RECORD

To complete the cycle, requesting providers must have access to the radiology reports. In addition to receiving the reports on hardcopy, they may also access the reports online to view them more quickly. Notice in the example below, the requesting provider accesses the Profile of Radiology Exams and Print Radiology Report by Patient options directly. These options are assigned by the Computer Site Manager.

In the examples below, notice the Status of Exam column to the right. The user may display or print the report section (radiologist's diagnosis) of only those exams with a status of COMPLETE. Select an exam report to review or print by entering one of the sequential numbers offered. General information about the exam will be displayed first, then options to display the activity log and status tracking log will be presented. The log provides information regarding the progress of the exam as it proceeded through the Radiology Software, such as when the exam was done, when it was transcribed, and when it was verified. When the display of the status tracking log or the report is finished, the user may enter a "T" to review the report again from the top.

#### 3.5.1. Reviewing Radiology Exams

By using this avenue to review their requests, physicians can see those which are still incomplete. Although they will be unable to view the reports until they are verified, the physician can see where the request is within the radiology system. In many cases, the physician may also be a radiologist and be permitted to verify his own reports. Although this option will not generate a pretty report, it does provide the necessary access for physicians and the desired request information. If such a report is desired, refer to *Section 3.5.2 - Printing Reports by Patient*.

**MENU PATH: Patient Profile Menu  
Profile of Radiology Exams**

SELECT RADIOLOGY PATIENT: DEMO, PATIENT M 12-01-45 123731795 840996

\*\*\*\* CASE LOOKUP BY CHART# \*\*\*\*

PATIENT'S NAME: DEMO, PATIENT #84-09-96 RUN DATE: JAN 6, 1993

	CASE NO.	PROCEDURE EXAM	DATE	STATUS OF EXAM
1	12	ABDOMEN MIN 3 VIEWS+CHEST	JAN 5, 1993	COMPLETE
2	4	ESOPHAGUS	NOV 16, 1992	COMPLETE
3	3	MAMMOGRAM UNILAT	NOV 16, 1992	COMPLETE

TYPE '^' TO STOP, OR

CHOOSE FROM 1-3: 1

=====

NAME : DEMO, PATIENT #84-09-96

DIVISION : ANCH MED CTR CATEGORY : OUTPATIENT

LOCATION : RADIOLOGY DEPARTMENT WARD :

```

EXAM DATE :JAN 5,1993 16:09 SERVICE :
CASE NO. :12 BEDSECTION:
CLINIC :DAY SURGERY
-----
PROCEDURE :ABDOMEN MIN 3 VIEWS+CHEST
REQ PROVIDER :MEDICAL,DOCTOREXAM STATUS :COMPLETE
REQ LOCATION :DAY SURGERY REPORT STATUS :VERIFIED
STAFF RAD. :RADIOLOGIST,RHONDA DIAGNOSIS :
TECHNOLOGIST :TECHNICIAN,TAMMY COMPLICATION :NO COMPLICATION
EXAM ROOM :PORTABLE FILMS : 14X17 (35X43CM) -3
-----
-----EXAM MODIFIERS-----
DESCRIPTION :
=====
DO YOU WISH TO DISPLAY ACTIVITY LOG? NO// Y

*** EXAM ACTIVITY LOG ***
DATE/TIME ACTION COMPUTER USER
-----
JAN 5,1993 16:09 EXAM ENTRY GREETUM,GRETA
JAN 5,1993 16:22 EDIT BY CASE NO. TECHNICIAN,TAMMY

*** REPORT ACTIVITY LOG ***
DATE/TIME ACTION COMPUTER USER
-----
JAN 6,1993 11:28 INITIAL REPORT TRANSCRIBE,TERRY
TRANSCRIPTION
JAN 7,1993 15:32 VERIFIED RADIOLOGIST,RHONDA

=====
DO YOU WISH TO DISPLAY STATUS TRACKING LOG? NO// Y

*** STATUS TRACKING LOG ***
STATUS DATE/TIME ELAPSED TIME CUMULATIVE TIME
(DD:HH:MM) (DD:HH:MM)
-----
WAITING JAN 5,1993 16:09 00:00:13 00:00:13
FOR EXAM
EXAMINED JAN 5,1993 16:22 00:19:07 00:19:20
TRANSCRIBED JAN 6,1993 11:29 01:04:03 01:23:23
COMPLETE JAN 7,1993 15:32
=====
DO YOU WISH TO DISPLAY EXAM REPORT TEXT? NO// Y(OPTION AVAILABLE FOR
VERIFIED REPORTS ONLY)
NAME :DEMO,PATIENT CHART # :84-09-96
PROCEDURE :ABDOMEN MIN 3 VIEWS+CHEST EXAM DATE :JAN 5,1993 16:09
REQ PROVIDER :MEDICAL,DOCTORCASE NO. :12
STAFF RAD :RADIOLOGIST,RHONDA
=====
EXAM MODIFIERS :NONE

CLINICAL HISTORY:PLAYING IN A FOOTBALL GAME.
REPORT: STATUS: VERIFIED
ALL REPORT TEXT SHOULD BE HERE IMPRESSION:
THIS IS THE IMPRESSION TEXT.

ENTER 'TOP' OR 'CONTINUE': CONTINUE// RETURN
(RETURN WILL NOW BE TO THE PHYSICIAN'S MAIN (PRIMARY) MENU.)

```

```
SELECT RADIOLOGY TOTAL SYSTEM MENU OPTION: RETURN
```

### 3.5.2. Printing Reports by Patient

Using this option, a physician can print a selected report for his patient. Remember that only those exams with a Status of Report equal to COMPLETE can be printed.

**It is strongly recommended that the report be printed on a printer.** If the report is printed to the monitor, it repeats the header information each time it clears the screen. Therefore, only 9 new lines of the report are printed with each clearing.

**MENU PATH: Films Reporting Menu  
Print Radiology Report by Patient**

```
SELECT RADIOLOGY PATIENT: DEMO, PATIENT          M 12-01-45 123731795      840996

**** CASE LOOKUP BY CHART# ****

PATIENT'S NAME: DEMO, PATIENT  #84-09-96          RUN DATE: JAN   6, 1993

  CASE NO.  PROCEDURE                EXAM DATE      STATUS OF REPORT
  -----  -
1    12     ABDOMEN MIN 3 VIEWS+CHEST  JAN   5, 1993   DRAFT
2     4     ESOPHAGUS                 NOV  16, 1992   VERIFIED
3     3     MAMMOGRAM UNILAT          NOV  16, 1992   VERIFIED

TYPE '^' TO STOP, OR
CHOOSE FROM 1-3: 2
DEVICE: HOME// REPORT-P  PARALLEL PORT  RIGHT MARGIN: 80// RETURN
DO THE USER WANT HIS OUTPUT QUEUED? NO// Y (YES)

REQUEST START TIME: NOW// 12:18  (JAN 07, 1993:@12:18:00)
REQUEST QUEUED.

(RETURNS THE USER TO THE CALLING MENU)
```

### 3.6. DISPLAYING AND VIEWING EXAMINATION REQUESTS

At any point in the processes described in this section, the user may display information regarding the examination records. An examination request can be viewed in two manners: by (1) View Exam or by (2) Detailed Request Display. They both display similar information in different formats.

#### 3.6.1. Viewing an Examination

This displays activity log and tracking log information in addition to information from the examination records. Using this option, the user can view the status of the request (until it has been completed) within the radiology software. Notice that the user can access this information by patient name or chart number in addition to the case number.

**MENU PATH:** Exam Enter/Edit Menu  
View Exam by Case #

```
LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?
  SELECT ONE OF THE FOLLOWING:

      C      CASE NUMBER
      P      PATIENT NAME OR CHART#

ENTER RESPONSE: C// RETURN ASE NUMBER

ENTER CASE NUMBER: 12
=====
NAME :DEMO,PATIENT      #84-09-96
DIVISION :ANCH MED CTR  CATEGORY :OUTPATIENT
LOCATION  :RADIOLOGY DEPARTMENT  WARD :
EXAM DATE :JAN  5,1993  16:09 SERVICE :
CASE NO.  :12  BEDSECTION:

      CLINIC      DAY SURGERY
-----
PROCEDURE :  ABDOMEN MIN 3 VIEWS+CHEST
REQ PROVIDER:  MEDICAL,DOCTOR EXAM STATUS :COMPLETE
REQ LOCATION:  DAY SURGERY  REPORT STATUS :VERIFIED
STAFF RAD.:  RADIOLOGIST,RHONDA  DIAGNOSIS :
TECHNOLOGIST:  TECHNICIAN,TAMMY  COMPLICATION :NO COMPLICATION
EXAM ROOM :  PORTABLE FILMS : 14X17 (35X43CM) -3
-----EXAM MODIFIERS-----
  DESCRIPTION :
=====
DO YOU WISH TO DISPLAY ACTIVITY LOG? NO// Y
```

```

*** EXAM ACTIVITY LOG ***
DATE/TIME          ACTION          COMPUTER USER
-----
JAN  5,1993  16:09  EXAM ENTRY          GREETUM,GRETA
JAN  5,1993  16:22  EDIT BY CASE NO.    TECHNICIAN,TAMMY

*** REPORT ACTIVITY LOG ***
DATE/TIME          ACTION          COMPUTER USER
-----
JAN  6,1993  11:28  INITIAL REPORT          TRANSCRIBER,TERRY
                        TRANSCRIPTION
JAN  7,1993  15:32  VERIFIED                RADIOLOGIST,RHONDA

=====
DO YOU WISH TO DISPLAY STATUS TRACKING LOG? NO// Y

*** STATUS TRACKING LOG ***
STATUS              DATE/TIME          ELAPSED TIME CUMULATIVE TIME
              (DD:HH:MM)          (DD:HH:MM)
-----
WAITING          JAN  5,1993  16:09  00:00:13          00:00:13
FOR EXAM

EXAMINED          JAN  5,1993  16:22  00:19:07          00:19:20

TRANSCRIBED       JAN  6,1993  11:29  01:04:03          01:23:23

COMPLETE  JAN  7,1993  15:32  15:32

=====
LOOKUP BY CASE NUMBER OR BY PATIENT NAME/CHART#?
  SELECT ONE OF THE FOLLOWING:

      C      CASE NUMBER
      P      PATIENT NAME OR CHART#

ENTER RESPONSE: C// RETURN CASE NUMBER

ENTER CASE NUMBER: RETURN

```

The Detailed Request Display provides another means of checking on a request. While providing less information than the view covered in Section 3.6.1, access to this option may be easier based upon position within the menus. This option will also display information on completed requests.

**MENU PATH:** Radiology Order Entry Menu  
Detailed Request Display

```
SELECT PATIENT NAME: DEMO,PATIENT   M 12-01-45 123731795   840996

          ***** REQUESTED EXAMS FOR DEMO,PATIENT *****      2 REQUESTS

  ST URGENCY   PROCEDURE      REQ DT   REQUESTOR      LOCATION
1 P  ROUTINE   ACUTE ABDOMEN  01/05           MEDICAL,DOC     DAY SURGERY
2 P  ROUTINE   BA SWALLOW    11/17           GIVER,CARE      DAY SURGERY

SELECT REQUEST(S) 1-2 TO SCHEDULE OR '^' TO EXIT: EXIT// 1
NAME: DEMO,PATIENT   #84-09-96      DATE OF BIRTH: DEC  1,1945
-----
ORDER:                ACUTE ABDOMEN RIGHT

REQUEST STATUS:ACTIVE
REQUESTING PROVIDER:MEDICAL,DOCTOR
PATIENT LOCATION:    DAY SURGERY
ENTERED:             01/05/93 16:07 AM BY GREETUM,GRETA

REQUESTED:           JAN 5,1993
TRANSPORT:           AMBULATORY
EXAM STATUS:         COMPLETE

DO YOU WISH TO DISPLAY REQUEST STATUS TRACKING LOG? NO// Y  (YES)

*** STATUS TRACKING LOG ***
DATE/TIME           STATUS           USER           REASON
-----
01/05/93 16:07 AM   PENDING           GREETUM,GRETA
01/05/93 16:07 AM   ACTIVE           GREETUM,GRETA

SELECT PATIENT NAME: RETURN
```

### 3.7. WORKING WITH HARDCOPY RADIOLOGY REPORTS

When a radiology report is verified, copies of the report are automatically placed into print queues. In the examples that follow, it is assumed that a hard copy of each single report must be filed up to four times: one for the clinic; file room; medical records; and ward. Depending on how the Radiology Computer Expert defines printers and distribution queues for his site, the radiology reports can be printed at the individual locations or at a central location for manual, inhouse distribution. The functions described herein will show the user how to print the radiology reports, check on specific reports, and list all unprinted reports.

#### 3.7.1. Printing by Distribution Queue

Although the reports are placed in the distribution queues automatically, they must be released for printing manually. This function should be run at regular intervals throughout the day, based on the volume of requests being processed by the Radiology Department. A suggested starting point would be to clear the queues every 3-4 hours or whenever the radiologists finish their work (See the note on the next page). In the example below, the clinic reports were selected. All reports going to clinics will be printed.

**MENU PATH: Films Reporting Menu  
Distribution Queue Menu  
Print By Routing Queue**

```
SELECT ROUTING QUEUE: WARD REPORTS// ?  
ANSWER WITH REPORT DISTRIBUTION NAME  
CHOOSE FROM:  
    CLINIC REPORTS      FILE ROOM  
    MEDICAL RECORDS    WARD REPORTS  
SELECT ROUTING QUEUE: WARD REPORTS// CLINIC REPORTS  
SORT SEQUENCE SELECTION:  
-----  
    CHOOSE ONE OF THE FOLLOWING:  
        TERMINAL DIGITS  
        SSN  
        PATIENT  
  
    SELECT SEQUENCE: PATIENT// RETURN  
PRINT/REPRINT REPORTS SELECTION:  
-----  
    CHOOSE ONE OF THE FOLLOWING:  
        UNPRINTED  
        REPRINT  
  
    ENTER RESPONSE: UNPRINTED// RETURN  
DEVICE: HOME// REPORT-P RA CLERK'S OFFICE  
DO THE USER WANT HIS OUTPUT QUEUED? NO// Y (YES)  
REQUESTED START TIME: NOW// 12:26 (JAN 15, 1993@12:26:00)  
    REQUEST QUEUED.  
(RETURNS THE USER TO THE DISTRIBUTION QUEUE MENU)
```

Illustration: All reports for clinics will be printed. One of the reports is shown on the next page.

**NOTE:**

Some sites use colored paper to print these reports. The sites choose a particular color and always use that same color. This method distinguishes the radiology reports and makes them easy to identify.

## \*\*\* INSTALLATION CENTER - RADIOLOGY DEPARTMENT \*\*\*

Name: SOMEBODY, CLIFF                      DOB: 03-06-26 (66 yrs)  
Chart#: 17-36-45                              Sex: MALE  
  
Date of exam : DEC 22, 1992 10:54      Case#: 122292-15  
Category : OUTPATIENT  
Requesting Loc: DAY SURGERY              Req Provider: GIVER, CAREY  
Updated Pt Loc: DAY SURGERY              Entered Request: GREETUM, GRETA  
   Technician: TECHNICIAN, TAMMY  
Procedure: SPINE THORACIC AP&LAT      Radiologist: RADIOLOGIST, RHONDA  
   Verifier: RADIOLOGIST, RHONDA

-----  
Exam Modifiers:                      None

Clinical History:  
AIRPLANE ACCIDENT

Report:    Exam Status:                      COMPLETE  
The radiologist's report goes here.              Report Status:                      VERIFIED

Impression:  
Impression goes here.

Films were read by RHONDA RADIOLOGIST (Staff Radiologist)  
DOCTORX/TT/12-22-92/TT

\*\*\*\*\* Clinic Report - Permanent Chart Copy \*\*\*\*\*

Date printed: JAN 15, 1993 12:27

Page 1

### 3.7.2. Checking a Report's Print Status

Authorized staff can check on an individual report's print status by using its Print Status option. The example below indicates the report's status for the selected patient has been printed from the CLINIC REPORTS queue, but not from the other queues.

**MENU PATH:** Films Reporting Menu  
Distribution Queue Menu  
Report's Print Status

```
SELECT REPORT: 122292-15 SOMEBODY,CLIFF
-----
REPORT      : 122292-15                PATIENT : SOMEBODY,CLIFF
PROCEDURE   : SPINE THORACIC AP&LAT    VERIFIED: JAN  8,1993 10:21
ROUTING QUEUE      DATE PRINTED      PRINTED BY      WARD/CLINIC
CLINIC REPORTS     JAN 15,1993        EXPERT,EVELYN    DAY SURGERY
FILE ROOM                                     DAY SURGERY
MEDICAL RECORDS                                     DAY SURGERY
=====
PRESS RETURN TO CONTINUE...
(RETURNS THE USER TO THE DISTRIBUTION QUEUE MENU)
```

### 3.7.3. Generating an Unprinted Reports List

This option lists all the reports placed in the distribution queues and not yet been released for printing. This option should be run periodically throughout the day. If the list gets large and reports appear to be backing up, perform Print by Routing Queue as shown in Section 3.7.1. In the example below, a summary page is not provided.

**MENU PATH:** Films Reporting Menu  
Distribution Queue Menu  
Unprinted Reports List

DEVICE: HOME RIGHT MARGIN: 80// RETURN**SIMULATED PAGE BREAK**

UNPRINTED REPORTS LIST				JAN 15,1993		PAGE 1	
DAY/CASE	PATIENT	SSN	DATE	VERIFIED	WARD/CLINIC	ROUTING	QUEUE
111392-254	DUCK,DONALD EUG	2311	DEC 23,1992	16:03	DAY SURGER	FILE ROOM	
111392-254	DUCK,DONALD EUG	2311	DEC 23,1992	16:03	DAY SURGER	CLINIC REPORT	
111392-254	DUCK,DONALD EUG	2311	DEC 23,1992	16:03	DAY SURGER	MEDICAL RECORD	
111392-256	NEWGUY,MONDO		NOV 13,1992	13:48	FAMILY MED	FILE ROOM	
111392-256	NEWGUY,MONDO		NOV 13,1992	13:48	FAMILY MED	CLINIC REPORT	
111392-256	NEWGUY,MONDO		NOV 13,1992	13:48	FAMILY MED	MEDICAL RECORD	
122292-15	SOMEBODY,CLIFF	2534	JAN 8,1993	10:21	DAY SURGER	FILE ROOM	
122292-15	SOMEBODY,CLIFF	2534	JAN 8,1993	10:21	DAY SURGER	MEDICAL RECORD	

**(Returns the user to the Distribution Queue Menu)**

### 3.8. DATA SUMMARY

It is hoped that this section, coupled with the flowcharts given throughout this section, will help the user better understand the data requirements for each job function. Most of the IHS Radiology Software data items have been selected and are presented in the following three segments.

- RPMS System - data items that come from the RPMS system or that are initially filled in automatically by the Radiology Software.
- The three data items that are used to select or identify all patient records.
- A radiology data summary table that lists most of the IHS Radiology Software data items required for each job function.

#### 3.8.1. RPMS System Data

The Radiology Software is designed to work in conjunction with the RPMS software. Patient information must be on file within the RPMS system in order to register that patient for a radiology examination. Listed below are some of the data items that can be altered or will be displayed on status reports within the Radiology Software. All items come from the RPMS system or are initially filled in automatically by the Radiology Software.

<u>Data Item</u>	<u>Comment</u>
Category	OUTPATIENT, for example.
Request Urgency	ROUTINE, for example.
Mode of Transport	AMBULATORY, for example.
Isolation Procedures	NO, for example.
Scheduled for Pre-op	NO, for example.
Date of Birth	Patient's birthday.
Age	Patient's age.
Sex	MALE or FEMALE.
Veteran	YES, NO, UNKNOWN.
Eligibility	Eligibility status.
Ward	As appropriate.
Bedsection	As appropriate.
Clinic	As appropriate.
Attending Physician	As appropriate.

#### 3.8.2. All Functions

On almost every option, the user will be prompted to select a patient's record for processing. To make the selection, the user must enter one of the following items.

<u>Data Item</u>	<u>Comment</u>
Patient name	Patient's name. SMITH,JOHN, for example.
Chart number	Patient's six-digit chart number, 12-34-56, for example.
Case number	Incremented by 1 for each case. Reset on a weekly basis (1,2,3, ...) Incomplete exams' Case #s for the week are retained & not reused

### **3.8.3. Register Patient For Exams**

The table on the next two pages lists most of the IHS Radiology Software data items required by each job function.

**RADIOLOGY SOFTWARE DATA SUMMARY TABLE**  
**PART 1 of 2**

	Request an Exam	Register Patient For Exams	Edit the Exam	Transcribe the Report	Verify the Report
Patient Location	Ward or clinic or outpatient				
Person Requesting Order	Name of the doctor who requested exam				
Procedure	Name of procedure	Name of procedure			
Modifiers	If appropriate				
Clinical History	Optional text field				
Requester  (Who used the software to make this request)	Automatically filled in. Name of radiology staff member, not the doctor.				
Requested Date or Date Desired (**)	Automatically filled in, TODAY, for example	Enter date and time desired. RADIOLOGY EXAM DATE/ TIME.			
Case Number		Automatically assigned		Select by case number	Select by case number
Pregnant			Females only. Yes or No.		
Last Menstrual Period			Females only. Enter date		
Primary Means of Birth Control			Females only. Choose from list		
Technologist			Name(s) of Technologist		
Complication			Choose from list		
Primary Exam Room			Choose from list		
Film Size			Choose from list		
Number of Films Used			Enter number of films or cine feet		

**RADIOLOGY SOFTWARE DATA SUMMARY TABLE**  
**PART 2 of 2**

	Request an Exam	Register Patient For Exams	Edit the Exam	Transcribe the Report	Verify the Report
Staff Radiologist				Enter his name	
Opportunity to Copy Standard Report				May copy standard report into report text	
Reported Date				Enter date	
Clinical History				May edit clinical history if the user wish	
Report Text				Enter/edit report text	
Impression Text				Enter/edit impression text	
Request Status	PENDING	ACTIVE	ACTIVE	ACTIVE	COMPLETE
Exam Status		WAITING FOR EXAM	EXAMINED	TRANSCRIBED	COMPLETE
Report Status	NO REPORT	NO REPORT	NO REPORT	DRAFT or PROBLEM DRAFT	Radiologist may change setting to DRAFT or VERIFIED
Reports and Displays To Help Audit or Check Status	Detailed Request Display, Pending Radiology Request Log	Exam Status Display, View Exam by Case Number, Detailed Request Display	Exam Status Display, View Exam by Case Number, Detailed Request Display	Exam Status Display, View Exam by Case Number, Detailed Request Display	View Exam by Case Number
Opportunity to Print RADIOLOGY REPORT				Yes. Chance to print this unverified report.	
Opportunity to Print WORK SHEET		Yes			
Opportunity to Print FLASH CARDS		Yes			

## 4. HOW TO GENERATE ONLINE DOCUMENTATION

User online documentation may be accessed at any point the system is asking for user input by typing a single question mark (?). Typing two question marks (??) will provide a brief description of what is being requested. In some instances the help will be fairly comprehensive if a help frame has been provided for the requested item.

At the menu level entering question marks at the “Select . . . Option:” prompt also provides valuable technical information. For example, entering a single question mark (?) lists all options that can be accessed from the current one. Entering two question marks (??) lists all options accessible from the current one, along with the formal name and lock for each. Three question marks (???) display a brief description for each option in the menu. Typing a question mark followed by the option name (?OPTION) shows extended help, if available, for that option.

For further information about other utilities that supply online technical information, consult the Radiology Technical Manual.

## 5. GLOSSARY

Term	Definition
JACKET LABEL	Film label when patient data exposed on film.
FLASH CARD	A device for exposing ID data onto film
M	MUMPS environment
RPMS	Resource and Patient Management System
PCC	Patient Care Component of the RPMS
AMIS	A VA workload reporting system
VACO	A VA organization related to AMIS